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ESP News is a monthly e-newsletter produced and distributed by USAID's Environmental Services Program, or ESP, a five-year program, funded by the United States Agency for International Development and implemented under the leadership of Development Alternatives, Inc. (DAI). ESP works with government, private sector, NGOs, community groups and other stakeholders to promote better health through improved water resource management and expanded access to clean water and sanitation services. ESP News provides our partners information regarding program activities as well as other news on environmental services management issues in Indonesia.

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Integrated Site Selection Process: Progo Watershed Selected as Priority

Yogyakarta. ESP has recently initiated start-up activities in the High Priority Province of Central Java and the Special District of Yogyakarta (DIY). These are including field site selection, office establishment, staff recruitment, and coordination with other USAID programs. One of the first and most crucial activities undertaken in Central Java and DIY was the development of a structured, integrated, and rapid (three-week) site selection process to identify the Year One Integrated Priority Watershed.



ESP YOGYAKARTA/CENTRAL JAVA

Progo River with Merapi Mountain in the background.

A sixteen-member, multi-disciplinary ESP Team, drawing on ESP's Watershed Management and Biodiversity Conservation, Environmental Service Delivery, Service Finance, and RARE team, together with a short-term Biodiversity Conservation Advisor, Darrell Kitchenner, collaborated on the development of selection criteria. They also conducted a series of interview and site visit. This was aimed to evaluate five Central Java watersheds (namely Progo, Sengkarang, Bodri, Garang, and Opak Oyo), fifteen government agencies, and ten water utilities (PDAM) that lie within these watersheds over a three-week period in December 2005.

The Progo watershed that cuts across the provinces of Central Java and DIY was selected as the priority watershed for start up activities. The

four overarching factors that were used in the selection of the Central Java Priority Watershed were areas that have:

1. Existing Basic Health Services (BHS) programs and/or USAID Strategic Objectives;
2. High human populations, including high levels of poverty;
3. High incidence of water borne diseases, such as diarrhea and skin diseases; and
4. River basins that flow from 'ridges' to 'reefs'.

In addition to these factors, a matrix of site selection criteria was designed by ESP's Watershed Management, Service Delivery, and Finance Teams.

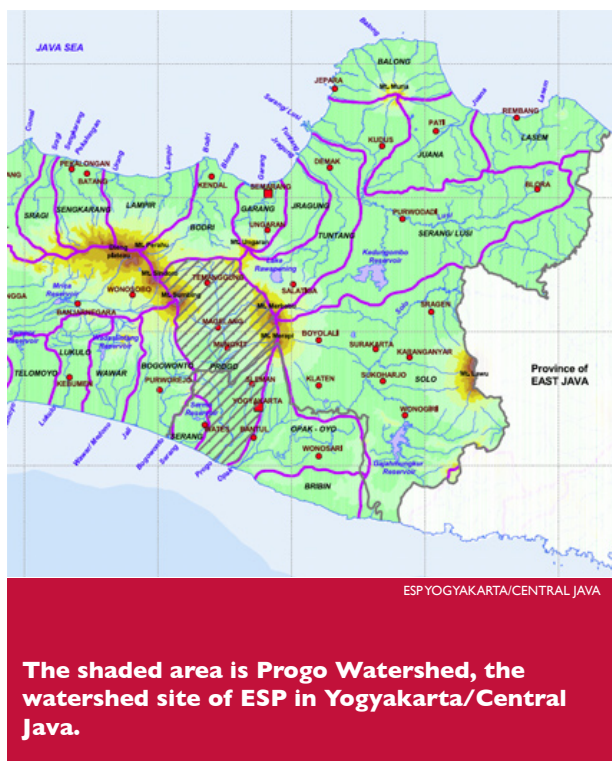
The Watershed Management team assessed each of the five watersheds based on the following three criteria:

1. Biological and natural resource values in the upper watershed (18 indices);
2. Community's productive activities & uses of water (e.g., conflicts, threats, population density, and disease) (20 indices); and
3. Watershed management & allocation for watersheds (e.g., water quality and solid waste management) (15 indices).

The Service Delivery and Finance team assessed the PDAMs based on the following seven criteria:

1. The extent of existing service coverage (e.g., potential for expansion to new customers and increased production);
2. Cost recovery;
3. Degree of interest/commitment for technical assistance;
4. Acceptability of non-revenue water losses;
5. Operating ratio;
6. Reasonability levels of long-term debt and acceptability of debt service cover ratio; and
7. The presence of existing municipal sewerage systems in urban areas that is receptive to upgrading and expansion.

The following additional factors also presented a compelling case to select Progo as ESP's Integrated Watershed for Year One:



1. The presence of many deep wells in Merapi National Park and numerous springs in the watershed. They provide water to major population areas in the two provinces (Central Java and DIY);
2. The presence of Merapi and Merbabu National Parks. They contain high biodiversity values, two endangered species (e.g., Javan Eagle and Leopard), and are in great need of improved management practices to mitigate against conflicting land uses and environmental degradation;
3. The presence of 8 PDAMs in the Progo watershed (ESP's Service Delivery team must ideally work in 6-7 PDAM in year 1) (all other watersheds that were assessed have only 1-2 PDAMs);
4. The fact that 2 PDAMs in the watershed (plus one in Solo) are at full-cost recovery, which is a requirement for ESP's Finance Team to begin looking at corporate finance mechanisms with them;

5. High receptivity of local government agencies, including PDAM, to work with ESP;
6. The presence of an existing, newly formed, multi-stakeholder watershed management forum, but one that lacks funding and a motor to propel the forum into action;
7. The presence of a wide range of local government institutions, universities, non-governmental organizations, religious organizations, and other on-going and/or recently completed donor-funded programs that are active in sectors related to water and governance issues (e.g., USAID, DFID, GTZ, Swiss Development Agency); and
8. The presence of an existing municipal sewerage system in the province of DIY that is receptive to upgrading and expansion.

The Finance and Service Delivery team have identified the following water utilities to collaborate with in the Progo Watershed in Year One: PDAMs of Magelang District, Magelang City, Yogyakarta City, and Sleman District. They will also work with one PDAM in Solo City, which lies one hour outside the Progo watershed.

The ESP Central Java/DIY Team is now designing another integrated sub-watershed site selection process to identify the specific Year One field sites (at the district and village levels) to work with in the upper and middle Progo watershed. (Sharon Lumbantobing, ESP Yogyakarta/Central Java)

Rice Farmers Go Organic In Deli Serdang



ESP MEDAN/NORTH SUMATRA

Rice planting techniques was one of the learning activities.

Deli Serdang. On February 28, 2006 ESP held a “Field Day” at the USAID/ESP Farmer Learning Center (Wadah Belajar Petani) in Sidodadi Ramunia village (Beringin sub district of Deli Serdang). The event was aimed at promoting water-saving and non-polluting sustainable agricultural practices, as well as celebrating the second harvest of ecological rice (“Eco Rice”) by the farmers from four sub-districts.

The “Field Day” event encompassed a variety of learning activities from water quality testing to making “Indigenous

Micro Organisms” that are used as compost for plants. The harvest follows trials conducted in various villages in the sub districts of Tanjung Morawa, Lubuk Pakam and Pagar Merbau in Deli Serdang, and confirm the benefits of ecological rice production - also known as SRI (System of Rice Intensification).

Local farmers from several sub districts in Deli Serdang district, stakeholders from the Deli River Action Network including ESP partners from ridge to reef (eg. the KERINA community network), the Provincial Health Service, the local Environmental Management Agency of North Sumatra (BAPEDALDASU - Badan Pengendalian Dampak Lingkungan Daerah Sumatra Utara), the Agricultural

Service, local NGO's and the Environmental Journalists Network of North Sumatra including reporters from various national media, all took part in the activities.

Learning activities were held for the group, including seed selection, field preparation and rice planting techniques for "Eco-Rice", the making of micro-organism decomposers and compost, and hand washing with soap. Personnel from BAPEDALDA's laboratory conducted water quality testing on samples drawn from local wells and ground water. The final activity was a shared lunch (after hand washing) where all participants tasted "Eco-Rice" and locally grown organic vegetables.

(Widyastama Cahyana, ESP Medan/North Sumatra)

Why "Eco-Rice"?

"Eco Rice" or "Ecological Rice" has the following benefits:

- Eliminate chemical fertilizers and pesticides, hence reduced to zero the risk of acute human poisoning as well as chemical pollution of a watershed;
- Improve soil fertility and stability through increased organic matter;
- Use 30-40 percent less water than regular rice;
- Require 80% less seeds;
- Increase production by 25%;
- Reduce overall cost by 20%.

Water Testing Day Events: "In fact, there are easy ways to obtain potable water. Just ask me how..."

National. *"In fact, there are easy ways to obtain potable water. Just ask me how..."* This sentence is written on the back of the t-shirts of dozens of happy students and teachers participating in the Water Testing Day (WTD) held in SMPN 10 Padang, West Sumatra on February 6. The situation that afternoon was very different from usual. A huge tent was installed at the school yard, accommodating four groups of students who were busy processing water through four simple ways of boiling, solar water disinfection, chlorination and ceramic filtration.

Different WTD events were performed by elementary school students in other cities, while the WTD event in Padang was carried out by secondary school students. All these educational fun activities were aimed at promoting students' awareness on the importance of healthy drinking water in order to reduce diarrhea cases.

This ESP-USAID sponsored activity involves local partners - students, teachers, parents, the local health offices, education offices, public works offices, and local water utilities offices (PDAM). Events were conducted in Serang, Jakarta, Bandung, Medan, Surabaya and Padang. SWVS/AmanTirta which produces "Air RahMat" (a liquid 1.25% sodium hypochlorite solution) supported the events by providing technical assistance. Kang Deden, a radio announcer-cum-child activist with experience from the Post Tsunami Children Center in Aceh, hosted the events in Serang, Jakarta and Bandung.



ESP JAKARTA/WEST JAVA

School Children of Public Elementary School Rawa Barat 07 closely observing the results of tested water samples.



ESP PADANG/WEST SUMATRA

Students of Public Junior High School 10 in Padang pour chlorine into a bucket of water as part of water treatment experiments on "Water Testing Day".

In general the events were fun and attracted many spectators. Students improvised with poetry (both in English and Indonesian), music, rap songs and other performances. All these combined to make a serious, yet relaxed activities with quiz contests and presentations from each group.

Students conducted tests by pouring in Collilert, a reagent that is widely use to test water quality, into water samples and kept them in an incubator box for 24 hours. Results of their test were then discussed by laboratory experts in each region. In Padang the test results were taken to a laboratory at the local health office. The lab results were then discussed by a panel in a local newspaper.

"Water Testing Day" events have generated wide media coverage in both print and audio visual. At least six print media, five TV stations and four radio stations provided coverage in different regions.

"Chlorinating is very easy. I will practice it at home. It saves money and does not need kerosene to boil water," Urfa, a student from Jakarta, told a TV station. Chlorination is performed by introducing drops of "Air RahMat" in a water container and shaking the container for 30 seconds. The water will then be ready for drinking 30 minutes later.

"At first, I didn't know that sun rays can also process drinking water," said 13 year old Retno after practicing the SODIS (solar water disinfection) method. SODIS is performed by exposing a water-filled bottle to direct sun for at least six hours. The bottle can be placed on a piece of black material, painted half in black or placed on a corrugated iron sheet to increase heat.

Ceramic filtration is performed by pouring water into a container containing a ceramic filter.

In addition, the events also emphasized the importance of preventing practices that may hamper our access to healthy drinking water. With boiling water for instance, some people turn off the stove



ESP SURABAYA/EAST JAVA

School Childfren of Al Izzah Islamic Elementary School take notes while testing the water.

when the water boils, whereas it should be boiled for another two to four more minutes to completely kill the microbes. Improper storage of water in an open container and use of dirty appliances may also contaminate water.

These events serve to remind people that contaminated water has killed more people than cancer, wars or car accidents. In developing countries 75 percent of all diseases are caused by contaminated drinking water. In Indonesia, more than 100 million people do not have access to healthy drinking water, and more than 70 percent of the population depends on contaminated water resources. It comes as no surprise therefore if diarrhea is the second deadliest disease in Indonesia.



ESP SURABAYA/EAST JAVA

School children in Surabaya preparing for the “Water Testing Day” event.

As many students in Serang, Jakarta, Bandung, Medan, Surabaya and Padang now know, knowledge on how to produce clean water through simple methods is vitally important and helps to fulfill their demand for healthy drinking water.

(Alwis Rustam, ESP Jakarta/West Java)

Tembung Villages to Tackle Solid Waste Management

Deli Serdang. USAID’s Environmental Services Program in Tembung Village on the Percut River took a number of big steps in February. After holding public discussions on village regulations concerning solid waste, training for community facilitators was organized recently. The training encompassed a broad range of topics including solid waste management, urban re-greening, health and hygiene, waste recycling and composting. A local NGO, “Bis Peduli”, supported the training with inputs on methods for community-based plastic recycling. Meanwhile, Deli Serdang Agriculture Service has committed to support riverside re-greening efforts. Tembung Village was previously famous for its Duku fruit trees that have long disappeared and replanting the trees is necessary.



ESP MEDAN/NORTH SUMATRA

Participants actively participated in the solid waste management training program.



ESP MEDAN/NORTH SUMATRA

Initiated by the participants of the solid waste management training program, over two hundreds people from Tembung Village cleaned their neighborhood.

Following the training, the community was mobilized for two Sundays in a row to tackle the most pressing issue: piles of trash along the riverbank. On the second weekend, over 200 people were involved including women, religious leaders, local government officers, youngsters, senior citizens and even some members of the armed forces.

This ‘mass management’ of solid waste is just one step in strengthening the organization of the community around environmental health issues. This village is also the point of USAID collaboration with JBIC which has built a number of concrete waste receptacles along the riverside.

(Juliansyah, EPS Medan/North Sumatra)

USAID DCA Guarantee Being Actively Marketed for Piped Water Supply Projects

Jakarta. ESP Municipal Finance Team has completed feasibility studies for the proposed expansions of two piped water utilities in the High Priority Provinces of Java and Sumatra, and is working on several others which should be ready within the next few months. Each of these utilities needs commercial credit to execute its investment program. Traditional sources of loans through the Ministry of Finance have not been generally available since the 1997 Asian Crisis. Moreover, donors and government are unable to implement needed loan programs due to the absence of needed legislation. Lack of credit, of course, slows the pace of increase in household connections in larger cities as a result of constraints in expanding production or distribution. The lack of credit, most acutely, affects the larger utilities where population pressures, resulting from increased urbanization, lead to the greatest demand for service cover. This, in turn, makes it more difficult to control the incidence of water borne diseases so prevalent in the peri-urban areas of the large cities.

PIPELINE OF WATER PROJECTS

PDAM	PROJECT DESCRIPTION	TOTAL 5-YR INVESTMENT (Rp billion)	LOAN FINANCING (Rp billion)	PPP FINANCING (Rp billion)
TIRTANADI SUMUT	System Expansion	641.4	160.0	
KOTA CIREBON	Bulk Water Supply	88.0		88.0
KOTA MALANG	System Expansion	57.5	40.2	
KAB. BOGOR	System Expansion	194.7	68.0	
KOTA BOGOR	Distribution Network Expansion	34.5	34.5	
KAB. SUBANG	Bulk Water Supply	27.0		27.0
KAB. SUBANG	Water Treatment Facility	30.0		30.0
KAB. TANGERANG	Greenfield	144.5		144.5
KOTA BANDUNG	System Expansion	50.0		50.0
KAB. MAGELANG	Bulk Water Supply	105.5		105.5
PDAM KAB. MAGELANG	System Expansion	60.9	36.5	
PDAM KOTA SOLO	System Expansion	55.8	33.5	
PDAM KOTA JOGJAKARTA	Bulk Water Supply (KARTAMANTUL)	441.3		441.3
	TOTAL	1,931.1	372.7	886.4

Work has only recently begun on these projects and the proposed investment for each is still undefined.

Municipal Finance Team has 13 engagements currently where borrowing or public private partnership needs are identified, including Rp372.7 Bn in loan financing and Rp886.54 Bn in PPP financing. It is currently in the market seeking debt financing for PDAM Kb Bogor and Kt Malang.

To address this problem, considerable focus is being placed by ESP on opening up channels of commercial finance for projects such as are shown above. To attract non-traditional finance, ESP is relying on USAID's Development Credit Authority ("DCA") Guarantee, a partial credit guarantee made available to selected borrowers and private commercial lenders, covering up to 50% of the lender's exposure. The projects considered by ESP are of two types: straight commercial loans where the network expansion is carried out by the utility itself; or public private partnerships, where a private sponsor is contracted to expand the capacity of the utility in a specific area e.g., water treatment or bulk water supply.

POTENTIAL DCA PARTNERING INSTITUTIONS

Banks	Maximum Lending Term	Interest Rate	Interest in Water/DCA	Previous Water/DCA Experience
Bank Niaga	7 years	Floating rate	Yes/Yes	Yes
Bank Danamon	7 years	Floating rate	Yes/Yes	Yes
Bank Mega	7 years	Floating rate	Yes/Yes	None
Abacus Capital	8 years	Floating rate	Yes/Yes	None
Danareksa	8 years	Fixed rate for bond	Yes/Yes	None
BII Syariah Platinum	5 years	Floating rate	No/Yes	None

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Several financial institutions have been approached to determine their interest in lending to the specific utilities in the water sector, as shown in the inset on the previous page. Two reasonably complete financial viability studies have been left with those financial institutions visited: PDAM Kabupaten Bogor, which has an ambitious network expansion plan of Rp 200 billion over the next 5 years; and Kota Malang, with a more moderate plan amounting to Rp 45 billion. Both utilities have given ESP a mandate to market their borrowing needs. In the case of Bogor District PDAM, the mandate provided by the General Director has extended this mandate to include both the bank and bond marketplaces. Danareksa, the largest investment house in Indonesia, and one of the institutions in the table above, has indicated preliminary interest in addressing the borrowing needs of this water utility through a bond offering. It is anticipated that preliminary introductions and early negotiations between the water utility, Kabupaten, Danareksa and ESP are expected to commence the week of 10 April 2006. Bank Danamon, Bank Niaga and Bank Mega have all expressed interest in evaluating PDAM Kota Malang's feasibility study. Over the next month, Municipal Finance Team has targeted a half-dozen additional financial institutions to visit.

(Bob Parra, ESP Jakarta/West Java)